**Shifts in Pediatric Care Delivery from Secondary to Tertiary Care Settings**

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*Diabetes Care Program of Nova Scotia (DCPNS), Halifax, NS, Canada

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**Background**

- Canadian and international guidelines indicate that pediatric diabetes care should be provided by skilled multidisciplinary teams including:
  - Nurses, dietitians, social work, mental health professional
  - Either pediatric endocrinologist or pediatrician with diabetes expertise
- The Diabetes Care Program of Nova Scotia (DCPNS) has set standards for and supported diabetes care in NS since 1992
- There is one pediatric Tertiary Care and multiple Secondary Care Diabetes Centres
- Philosophy to support local pediatrics and diabetes teams to provide standardization of patient-centred care close to home
- Complex patients referred to Tertiary Centre for shared care

**Aim**

To describe changes in patterns of pediatric diabetes care over a 10-year period in NS

**Methods**

- All newly diagnosed pediatric diabetes cases (≤16yrs) in the DCPNS provincial registry for 3-year periods from 2004 to 2006 and 2014 to 2016
- Cases with gestational diabetes or impaired glucose tolerance during pregnancy excluded
- Location of initial and ongoing care determined for all visits in each time period and classified as:
  - Tertiary Only, Secondary Only, or Shared Care
- Care patterns, over all and for pump starts, for the 2 periods (counts and proportions) were compared using two-proportion z-test, chi-square test, and Fisher’s exact test as appropriate.

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Website: diabetescare.novascotia.ca

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**ICB**

- To improve, through leadership and partnerships, the health of Nova Scotians living with, affected by, or at risk of developing diabetes, remains the same.

**RESULTS**

**Number of Newly Diagnosed Cases and Diabetes Type Did Not Change Over Time**

<table>
<thead>
<tr>
<th>Diabetes Type</th>
<th>2004-06</th>
<th>2014-16</th>
</tr>
</thead>
<tbody>
<tr>
<td>All types</td>
<td>217</td>
<td>221</td>
</tr>
<tr>
<td>Type 1</td>
<td>182 (84%)</td>
<td>169 (76%)</td>
</tr>
<tr>
<td>Type 2</td>
<td>20 (9%)</td>
<td>24 (11%)</td>
</tr>
<tr>
<td>Other*</td>
<td>15 (7%)</td>
<td>28 (13%)</td>
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**The Location of Care Shifted over Time**

- Tertiary Only decreased 16%
- Secondary Only decreased 31%
- Shared Care increased 36%
- Shift occurred in type 1 only (p=0.009)

**The Shift Was Not Explained by Increased Referral of Cases Under Age 6 Years**

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<tr>
<th>Pattern of Care</th>
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<td>&lt;6 years: No Change</td>
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**Total Visits Increased Over Time**

- Total visits increased 5% (2,512 to 2,644)
- Tertiary visits increased 30% (899 to 1,287)
- Secondary visits decreased 11% (1,523 to 1,357) (p=0.01)

**Conclusions**

- More families are travelling to the Tertiary Care centre for diabetes care
  - May add to the burden of diabetes care for families and Tertiary care providers
  - May be preferred by families
- Parent and patient input regarding their preferences should be sought
- Changes coincide with increased use of diabetes technology and provincial funding for insulin pumps, despite having standardized tools and processes for pump starts in place
- To stay current with this technology requires adequate time and patient numbers
- This should be recognized and supported
- The changes coincide with a move of diabetes team management to primary care
- This restructuring may influence prioritization of time and resources
- If families are to be supported in their home communities, factors allowing care to occur in some districts should be determined and shared.

**Pump Starts Increased over Time, but Only Among Patients Accessing Tertiary or Shared Care**

- Pump starts* increased 64% (from 22 to 36).
- Pump starts* increased from none to 1.8% of cases (p=0.029)

- Eastern Zone: Shared Care increased from none to 1.8% of cases (p=0.144)
- Northern Zone: Shared Care did not change. The Tertiary Only care doubled (p=0.113)

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